ePooki

11/2011 - Benchmarking innovative curricula design process over continents

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One of the recently set goals for universities in Finland, and in Chile as well, is to become "truly international". International contacts should be part of the everyday practices of students, lecturers and other staff members. Exchange periods should be more than short fact-finding trips. They should include true working together with foreign colleagues and lead to tangible results. At organisational level this objective means consistent and permanent contacts with few strategically important universities, first to learn from each other, and then to conduct joint actions. This article presents a framework for organising such learning processes, in other words benchmarking, towards true international co-operation.

Oulu University of Applied Sciences (OUAS) and Universidad Católica del Maule (UCM) organised, during the years 2009 - 2010 an expert exchange programme including two working periods, four and six weeks, in the companion university. The thematic focus of the exchange was Natural Resources and Environmental Management. In the present global markets North Europe and South America have many common commercial interests and they both face demanding sustainability requirements related to the use of natural resources.

The overall aim of the exchange programme was to support the development of educational programmes at host institutes by means of evaluation and exchange of experiences related to innovative curricula processes[1]. As a result a comparative analysis was produced. The focus areas of the comparative analysis included

- Recommendations on how to develop curricula design and improvement process in institutions.
- Model of the process to build courses aiming at professional competences.
- Model of quality assessment – criteria and indicators for control and corrective actions.
- Recommendation for a new curriculum of Natural Resource Management
- Recommendation for joint R&D-projects concerning innovative curricula processes and learning

The methodology used to accomplish the objectives was the Functional Benchmarking (FB). The FB-process between OUAS and UCM has now reached the first two phases.

ARTIKKELIT

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RAPORTIT

JULKAISUPERIAATTEET

OHJEITA KIRJOITTAJILLE

JULKAISUNEUVOSTO

ARTIKKELIHAKU

hakusana

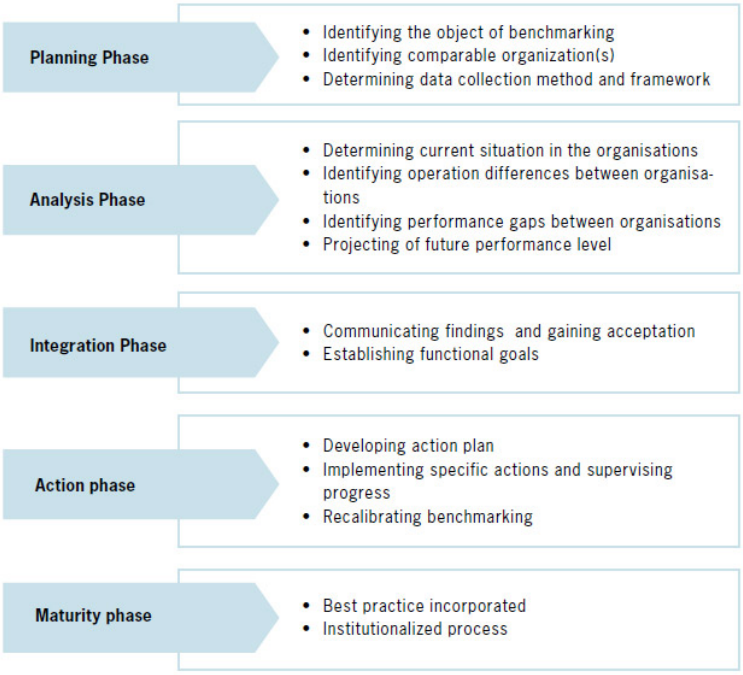

Figure 1. Benchmarking model (adapted from Camp 1989) [2]

Phases from planning to information analysis

In the planning phase bilateral contacts were established. The initiative to the process was originally by UCM. They have an intention to integrate the traditionally separated degree programmes of forestry and agriculture by launching a new programme of renewable natural resources. In OUAS the forest, agriculture, horticulture and environmental education are integrated under the concept of renewable natural resources. Also, in general, internationally highly valuated educational system of Finland attracted Chilean colleagues.

The financial support for the exchange programme was applied for and received from CIMO, Centre of International Mobility. One of the focus areas of international contacts is South American countries. In 2009 and 2010 special focus was on Argentina and Chile, when CIMO granted funds for teaching visits between Finland and these countries. First visit in OUAS-UCM programme was realised from Oulu to Maule in 2009 by Jukka Tikkanen and a return visit from Maule to Oulu in 2010 by Carmen Bravo.

The FB data collection framework followed along the exchanges (Table 1) was jointly constructed by the partners: When studying innovative, competence based curricula design the focus ought to be put respectively on learning environment (including organisational and management issues), learning/teaching process, process of continuous development and on the outcomes. All these have to be studied consistently on University policy, degree programme, course planning and course implementation levels.

The framework in Table 1 served as a check-list for gathering and analysing data during the visits. Data gathering was done by studying written documents, by group discussions and by face-to-face interviews. In written format e.g. open and intra-web-pages of universities, curricula process descriptions, curricula documents, competence descriptions from national and university levels, and strategy papers of universities were analysed.

Numerous meetings and individual interviews were organised for the benchmarking, altogether 35 + 28 people were met, including university staff at all levels, students and working-life representatives. Visit programmes were organized by topics within the framework and each topic was coordinated by one specific lecturer as a host. In this structure, the topics considered quantitative and qualitative information in carefully planned and consistent manner.

In the analysis phase the data was condensed and current practices were first described in both universities. Then the universities were compared to find operational and organisational differences between them. Based on the analysis performance gaps were defined and finally future performance level was projected.

The main findings of the analysis are presented here. The more detailed analyses can be found in the two visit reports [3][4].

In both universities the staff members are highly motivated towards processes related to the innovative curricula design. The university support to the processes is good and maintains enthusiastic atmosphere.

Main things for consideration in both universities are:

- The profile and focus areas of the university is to be more consistently

discussed through, in order to be taken into account in curricula process.

- Co-operation structures between the different schools of the university are needed to contribute to and to harmonize innovative curricula design and to establish competence based learning practice.
- Core-competence and content analysis are needed, because too much details are included in the material constructed through the curricula process.
- The need to widen and modernize the perspective of programmes related to renewable natural resources is topical in both cases.
- R&D -projects should be integrated more closely with teaching and learning.
- Practical steps are needed to enhance internationalization in practice, at curricula and classroom level

Performance gaps in partner universities

From the point of view of OUAS the following negative gaps were identified: The competence based curricula process in UCM is effective, more detailed and better structured compared to OUAS. On the other hand the process in Finland and in OUAS is flexible and serves room for individual innovations which enhance the motivation of teachers to participate in processes.

The process of involving working life in UCM produces consistent feedback about the real-life needs for the curricula design process. UCM follows three level approach in communication with working life worth applying in Finland as well: 1) short term input especially for course planning by discussing with graduated engineers about their work-profile, 2) medium term input especially for structuring specific degrees by discussing with employers and 3) long term input especially for predicting degree structure of the university by discussing with the managers and developers of the companies and with researchers. More focus ought to be put on the continuity of the co-operation related to competence based curricula development to ensure the pro-activity of the process instead of reactivity.

From UCM perspective the identified negative gaps led to suggestions to develop a standard planning framework with the relevant information required for the quality control model. "Innomajakka" project of OUAS was identified as good practice, successful in linking learning and R&D. Similar project would be beneficial also in UCM to face the regional requirements in order to encourage professors to develop projects with the workplaces.

The computational system to support the teaching and learning process quality assurance is in an efficient development phase in OUAS, and should be developed in UCM as well. The competence descriptors for the grading scale should be launched also in UCM.

In OUAS a lot of emphasis has been put on the consistent strategy implementation and evaluation model where the school level objectives and measurable indicators are deducted from university strategy and consistently used as a management tool through personal level and school level auditing discussions. The intensive co-operation process within OUAS between School of Renewable Natural Resources and School of Engineering turned out to be interesting also from UCM perspective. It might be an effective means to increase the number of motivated students in the degree programmes of natural resources.

The above mentioned, and all the other findings and proposals as well based on the benchmarking process, are to be analysed in both universities. In **integration phase** most relevant proposals are to be planned and projected in Schools, in **action phase** they are to be applied as new procedures in action and in **maturity phase** they will be institutionalised as normal elements in everyday practices.

The process can be continued by a second benchmarking round. Then the focus should be on the gaps identified during the first round, in order to get deeper comparisons and analyses.

Future actions

As a side-effect of benchmarking, the following areas of cooperation between OUAS and UCM were identified as promising:

- Research and development projects in biotechnology, bio energy, technological transfer and rural development subjects.
- Pedagogical activities in the current and new degree programs. Two actions can be suggested:
  - Firstly, implementing two jointly organised intensive courses within the current degree programmes, one in each country, to concretize co-operation potentials
  - Secondly, identifying a set of common pedagogical activities in the new curriculum in order to start building a joint degree.
- Curricular innovation and a new degree program. In this area it is possible to:
  - Design and test a standard framework for the pedagogical development in the innovative competence based curricula design.

Because of the wide interest towards the above mentioned development challenges in Chile and in Finland, financial support to continue the co-operation should be available.

The whole world is now reachable and universities can learn from experiences and have beneficial joint actions, even with partners on the opposing poles of the globe.

Table 1. The framework for analysing competence based curricula design

		CURRICULA			
	University Policy-level	Degree level	Programme-level	Course level	Implementation
Environment	The coherence of administrative structures and facilities with competence based learning strategy. Do the curricula design requirements serve the learning of core competences?	Coherent and understandable definitions of the degrees enabling flexible and appropriate accreditation of the previous credits.	The general degree competences and university structures are properly taken into account in programmes.	Appropriate co-operation and coordination between courses within the framework of the programme	Consistent utilisation of the programme level competences and facilities at course level planning and implementation.
Process: Teaching / Learning	The university structures do not hinder the flexibility in implementing innovative learning and teaching solutions	Degree level competences are clear and commonly understood.	Degree and programme level competences are analysed and clearly taken into consideration in curricula	Course level competences are clear and functional and steer the everyday teaching acts	Coherent focus on core contents in everyday teaching/learning/ evaluation acts.
Process: Continuous development	Administrative and structural support to continuously develop teaching and learning	Consistency of the degree structure of the university	Continuity and depth of the co-operative career analysis	Continuous evaluation and modernisation of the courses.	Evaluation acts and usage of the results during the courses. Tools to support continuous evaluation.
Outcomes	The emotional and practical orientation towards competence-based working style in the university.	Flexible student flow from a degree to another and from a country to another. Enough differences between programmes in different universities and enough harmony inside the university?	Understandable, equal and updated relevance and functionality of the programmes.	Understandable and coherent courses in terms of the workload and in relation to other courses of the programme	Proper final learning outcomes

Lähteet

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Kommentit

Lisää kommentti